

ICE BREAKER

No.19

June 2002



ICE BREAKER is published independently by Malcolm Wallhead and Associates as a quarterly magazine covering Tasmanian Polar and Southern Ocean related topics.

EDITOR & PRODUCTION CO-ORDINATOR:
Anthea Wallhead

TECHNICAL ASSISTANT:
Robert Wallhead

DISTRIBUTION ASSISTANT:
Peter Wallhead

Comments and contributions for inclusion in future editions are most welcome. Please address them to:-

EDITOR, ICE BREAKER
MALCOLM WALLHEAD AND
ASSOCIATES
240 WATSONS ROAD
KETTERING, TASMANIA, 7155

PHONE : 03 6267 4774
FAX : 03 6267 4335
E-MAIL : wallhead@netspace.net.au

Unless specifically stated otherwise, the views expressed in this magazine are not necessarily those of any group, organisation, or institution. ICE BREAKER is published in good faith and contributors should ensure the truth of any facts stated.

ICE BREAKER
SUBSCRIPTION RATES
(4 ISSUES PER YEAR)

AUSTRALIA-WIDE INCLUDING
POSTAGE & GST
SA 22-00

ALL OTHER COUNTRIES
INCLUDING AIRMAIL POSTAGE
SUS 20-00

SPECIAL RATES ARE AVAILABLE FOR MULTIPLE
COPIES.
PRICES ON APPLICATION

EDITORIAL

There is nothing more stimulating than being in a room full of people who are all working together towards an agreed goal. This exciting atmosphere is generated when members of the Organising Committee for Antarctic Tasmania, the Midwinter Festival, meet with the Event Co-ordinator, Paul Cullen, to discuss progress on the wide range of activities being organised for the nine-day Festival in June this year.

Each person on this committee has worked intensively to correlate the aims of the Midwinter Festival with activities in their particular field of interest, whether it be tourism, film, photography, publicity, Antarctic displays or careers, school participation or social events. These people have shown the energy, interest and capacity to involve their special knowledge into a new community event, thus providing a clear example of 'Tasmania Together' and 'Intelligent Island'. Networking at its best. Congratulations to the committee and good luck with the Midwinter Festival. A program of events is included in this issue.

Also in this issue is an informative and amusing account of Professor Garth Paltridge's time as Director of the Antarctic CRC.

It is with regret that we farewell Bill Bleathman as Director of the Office of Antarctic Affairs. After only 18 months, Bill is moving to a new position as Director of the Tasmanian Museum and Art Gallery. The Antarctic community will miss his energetic implementation of activities boosting Hobart's Antarctic profile and it is hoped that the incoming Director will have a similar, vigorous approach.

Anthea Wallhead

Cover: Just a few of the large group of Midwinter Festival Committee members. Event Co-ordinator, Paul Cullen, centre rear with cap.

Photo courtesy Office of Antarctic Affairs



FROM THE PREMIER'S DESK

Winter is certainly upon us but this year it is definitely not a time for hibernation. Indeed the local Antarctic community promises a hot time in Hobart with the inaugural Antarctic Tasmania Mid Winter Festival.

I continue to be impressed at the rapid development of this event and I am pleased that my Government, through the Department of State Development and the Office of Antarctic Affairs, has been able to contribute to making a long wished for dream of our Antarctic communities a reality.

I would encourage all Tasmanians to don their coats, hats and scarves and participate in what promises to be a very unique and memorable festival.

I have also recently had the opportunity to be briefed on the proposed Antarctic Air Link by the Chief Executive of Skytraders Australia, Mr Norman Mackay. The project has the capacity to redefine cold climate aviation in a global sense and further reinforce the reputation of the Australian Antarctic Division as an innovator and leader in Antarctic matters.

I have reaffirmed to Mr Mackay my Government's commitment to the project, and have assured him that Tasmania's Antarctic community are united and committed to ensuring the success of the project.

Jim Bacon MHA
Premier
Minister for State Development

APOLOGY:

Martin McManus, Shadow Minister for Antarctic Affairs, regrets he is unable to provide his regular contribution to this edition of ICE BREAKER.





PEG PUTT'S MESSAGE

The removal of waste dumped in the Antarctic by previous Australian activities has been featured in recent press articles. Thinking has changed over the years and today we all acknowledge the need to protect and enhance the Antarctic environment, and I hope understand its significance as the last great pristine wilderness.

Cleaning up our mess is not a simple proposition however, particularly when it may be toxic and also frozen in an inhospitable and difficult environment. Having taken responsibility for its removal, recovery techniques need to be pioneered. Dr. Martin Riddle and those working with him deserve our praise for the work they have been doing on these problems.

Perhaps the methods developed may lend themselves to commercial exploitation, and at the least may assist with a clean up which hopefully will eventually extend beyond the Australian Antarctic Territory to the areas affected by the dirty dumping of others.

An important issue for Tasmania is the willingness of Tasmanians to be part of the clean up of Australia's Antarctic rubbish by receiving the waste which will be shipped out. I have been advocating that as good global citizens, we should be part of this solution so long as the appropriate environmental safeguards are in place to deal with difficult wastes. It would be unfortunate if the initiative were to founder due to the NIMBY (not in my back yard) syndrome, although at this juncture it doesn't seem to have reared its head.

It is important that having understood that we must stop dumping and clean up because of the need to care for the Antarctic, we also ensure that our current and future activities do not increase pressure on the fragile environment.

The installation of wind powered electricity generation now underway is another praiseworthy action which should reduce the need for fuel storage on site and lessen our greenhouse gas emissions, again reducing potential environmental impacts.

As tourism activity increases, the Antarctic environment is under assault, particularly on the Antarctic Peninsula with its proximity to South America. Whilst our own tourism is better managed, it would be great if our skills in this area could be utilised further afield on the continent. Many hold real fears for the progressive impacts.

If the new airlink is going to lead to increased tourism activity through a series of connecting flight options, then fuel dumps will be necessary and our Antarctic footprint may expand.

We should be actively considering these issues. In so doing, we must consider the threshold question of what activity should occur at all, before going on to consider ways of avoiding negative impacts from those activities which do go ahead. Saying yes to everything and then trying to manage the result is a recipe for gradual deterioration of the icy wilderness.

As we head towards a State election, no doubt the parties will wheel out their promises and bona fides on the Antarctic. The Greens are genuinely committed to ensuring that we respect Antarctica and that all our activities protect and enhance its environmental values.

Peg Putt MHA



TPN CHAIRMAN'S MESSAGE

The last quarter has been relatively busy given the fact that it is one of the winter quarters.

Two Antarctic related Seminars have been held in Hobart during this period:

- ∞ The Joint Scientific Committee of World Climate Research
- ∞ Contaminants in Freezing Ground

Both these Events focussed international attention on Tasmania and brought a significant number of Influential international decision-makers here. This fact, assisted by hospitality and friendship extended by many Tasmanians, including again the Governor, Sir Guy Green, does much to advance our future interests through increased Antarctic and Southern Ocean activity out of Hobart.

Another feature of the last quarter has been the burst of activity and enthusiasm surrounding the Mid Winter Celebrations. These promise to create a real landmark for our State right at the time when we need it most in the 'dead' of winter when many commercial traders are the most pressed to remain viable. I urge all TPN Members to participate fully in these events as we seek to build a new focal point for both celebration focussed on our links to Antarctica and it's attendant trading activities. A good result this year will do much to secure an even better one next year and on into the future. I note that both 'Salamanca Market' and the 'Taste of Tasmania' grew from similar beginnings.

The last Quarter has seen the TPN participating the provision of hospitality associated with visits from the Chinese, Italian and French Ambassadors to Australia. This level of Antarctic related ambassadorial activity, with 3 of the countries for whom Hobart is geographically attractive, is very encouraging to the objectives of the TPN.

At the March meeting of the TPN Dr Jo Jacka provided a briefing of AAD's planning for the Antarctic Airlink out of Hobart to be provided by Skytraders. This continued willingness by the Division to be open and sharing of information is most helpful and commendable in its value to the TPN's commercial members as they seek to position themselves to the advantage of both themselves and Tasmania.

The TPN will be exhibiting at the SCAR/SCALOP Conference in Shanghai in July and two TPN members will be attending to promote Tasmania and the Network. The future of the Hobart based COMNAP Secretariat is currently under review and we have tried hard to convince the decision-makers to remain here. The final decision is expected to be announced at the Shanghai meetings of COMNAP.

All Members will be both disappointed and pleased to hear of Bill Bleathman's recent promotion to the position of Director of the Tasmanian Museum and Art Gallery. Disappointed to lose his services to the TPN but pleased for the opportunity and recognition the new position will give Bill. Bill's time with OAA/TPN has been relatively short but he has used it well and will leave his mark with us. We all wish you well, Bill.

Bill Lawson. Chairman, TPN.

24/5/02



OFFICE OF ANTARCTIC AFFAIRS

During my time as Director of Office Antarctic Affairs (OAA), one of my primary goals has been to raise the profile of our sector to both Tasmanians and visitors to our Island. It is pleasing that the reporting of Antarctic issues and achievements is now gaining a significant momentum.

I have derived a great deal of personal pride and satisfaction from this position and I will continue to remain firmly committed to the promotion of Antarctica in my new role as Director of Tasmanian Museum and Art Gallery.

It has also been a pleasure working with a group of people who are devoted and totally united in promoting the State's capabilities. Tasmania can only be the winner from such an on-going level of commitment.

I feel very proud to have had an input into the following areas:-

- Establishment of the Mid Winter Festival,
- Hobart as the point of departure for the Antarctic Air Link,
- Launch of the Government's comprehensive Antarctic, sub-Antarctic and Southern Ocean Policy, and
- Membership growth and additional funding gained for the TPN

However I value the friendships and guidance of individuals within this sector, as most important to me. I would like to express my sincere appreciation to Cordula Ruckstuhl and Ben Galbraith.

Cordula is simply the most professional and organised person that I have worked with and when you are as unorganised as I am, these attributes are certainly a virtue. Her corporate memory and deep commitment to Antarctic matters is second to none, but more importantly her wise counsel and friendship are things that I value.

Ben has brought to the OAA an enthusiasm, vitality and a working knowledge of polar areas. His commitment and focus to getting the job done are of the highest order.

In closing I would like to sincerely thank everyone for their support and guidance in so many areas. I look forward to further opportunities for other collaborations in my new role.

Antarctica will always hold a special place in my thoughts.

The Department of State Development has advertised the position of Director of the Office of Antarctic Affairs immediately, instead of providing a temporary replacement until a later date. The position was advertised in the Tasmanian Government Gazette in the last week of May and appeared in State and National papers on Saturday, June 1, 2002. Further information is available from the OAA.

TWELVE YEARS WITH THE INSTITUTE OF ANTARCTIC STUDIES AND THE ANTARCTIC CRC

A personal view by the recently retired Director, Professor Garth Paltridge

Twelve years isn't all that long a time in the general scheme of things, but for one reason or another quite a lot has happened as far as IASOS is concerned. When I arrived in the early part of 1990, the grandly-named Institute of Antarctic and Southern Ocean Studies consisted of no more than three or four rather strange rooms in the basement of the Physics building of the University – together with three or four even stranger people who had spent the previous couple of years stitching together the bones of the embryonic Institute. It had all come about because of the foresight and energy of Professor David Green in the Geology Department. He it was who managed successfully to play the politics of the Australian Research Council and obtain quite respectable seed funding for IASOS to cover the next six years. He it was who managed successfully to play the politics of the University (a murky business at the best of times) and lay claim to a wing of the new Centenary Building so as to house the Institute when it was established. And he it was, together with Vice Chancellor of the time (Professor Alec Lazenby), who managed to squeeze the University even further and ensure that the new IASOS would be a stand-alone Centre of Excellence with its own staff and its own resources. It was this last decision which, more than anything else, ensured the survival and ultimate success of the whole venture.

When I arrived, IASOS had just produced its first four students with their "Graduate Diploma with Honours" in Antarctic Studies. And not a bad crop they were either. Three of them are still floating around the Institute today – this after each of them has collected a PhD and has in fact become individually rather famous in one way or another. Mike Pook needs no introduction to those who watch the evening TV weather. Patty Virtue is a recognized expert on lipids (whatever they may be), to say nothing of knowing more than most about the building of stone houses. Tony Worby is a world expert on sea-ice, and has spent some time in the US on a Fulbright Fellowship. And Simon Bowie has become a senior bureaucrat with the State government. Since that famous time, IASOS has produced about 15 Honours graduates a year – a total indeed of about 160 people, each of whom has spent a fairly tough year learning about Antarctica, doing research on some particular aspect of Antarctica, and, more importantly, becoming highly proficient at understanding the basis of several disciplines at once. Those disciplines range from the hard physical and biological sciences through to law and international relations. Tough years they may have been, but most of the Honours students have appreciated them in the end. And employers seem to like the product.

It so happened that the first couple of years with IASOS were a bit harrowing. Universities are strange places, and despite the initial decision that IASOS should be a stand-alone institution, there were still those who hankered after its absorption into one or more of the established departments of the time. Suffice it to say that luck played its part, and within two years we had managed to score the funding for what became known as the Antarctic Cooperative Research Centre (CRC). The advent of the overall Cooperative Centre's programme was a sea-change in Australian science. It appeared out of the woodwork of government initiatives so quickly that the Universities and their related scientific institutions simply didn't have enough time to kill the idea. As a result, quite sizeable dollops of money became available in six- or seven-year bites to develop new research initiatives for the benefit (primarily) of Australian industry. The Antarctic CRC was one of those unusual cases which became known as 'public good' CRCs. That is, it was not attached to some particular commercial enterprise. In fact the Antarctic CRC was the first of public-good CRCs, and in those early days of the 1990s life was particularly good fun. The bureaucrats had not yet learnt how to control the new tribes of fractious scientists and academics. More to the point, the injection of some millions of dollars per year into an operation which was closely allied to IASOS certainly got that rather shaky Institute off the ground with a bang.

And the years have been kind to us since. The CRC was established with a crowd of young and enthusiastic scientists who soon managed to make their mark around the international traps of Antarctic and Southern Ocean science, and in particular around the traps of the developing international programmes concerned with global climate and climate change. It has become one of the largest stand-alone Antarctic research

Continued next page >

institutions in the world, and indeed it is difficult to throw a brick at any international meeting about climate without hitting someone who has something to do with the CRC. Furthermore, each year the Centre and IASOS turn out somewhere between 5 and 10 new PhD graduates, all of whom seem to be lapped up by the international research community because (among other things) of the reputation of the CRC/IASOS combination.

The only real difficulty has been the maintenance of the Centre's basic federal funding in the face of changing government policy as to whether public good CRCs should or should not be supported for more than one or two contracts. Fortunately, at this precise moment when the Centre's second contract is coming up for renewal in mid-2003, it seems that the tealeaves governing this policy are favourable. As a consequence, the staff of the CRC are stitching together a very persuasive bid for a new contract. The focus of the research is to change more towards management of the Southern Ocean resources – a focus which is certainly in tune with the basic industry-oriented philosophy of the overall Cooperative Research Centre's programme. It is worth emphasising however that the new directions can be defined only because of the previous 12 years work of the existing Centre. The Antarctic CRC (or something very like it) is an Institution worth preserving.

And in any event, the original IASOS will continue apace as a separate Institute within the University, whatever the outcome of the bid for a renewed contract for the Antarctic CRC.

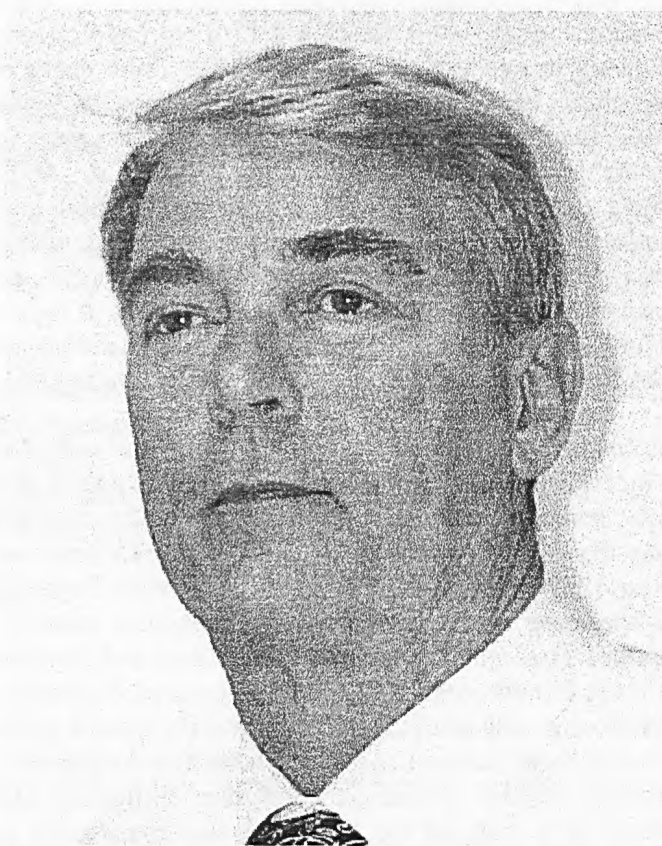
Garth W. Paltridge, April 2002

ANTARCTIC CRC'S NEW DIRECTOR

Professor Bill Budd, a world-renowned glaciologist and climatologist will take over the role of Director of the Antarctic CRC until its current contract expires in June 2003. Professor Budd was Professor of Meteorology at the University of Melbourne before joining the Antarctic CRC as Leader of the Polar Atmospheres Sub-Program in 1992. He is currently Leader of the Modelling Sub-Program.

Professor Budd has had a distinguished career and has been the recipient of major awards such as the Seligman crystal, the International Glaciological society's award for particular eminence in the field of Glaciology in 1996, and the R.M. Johnston Medal, the highest award of the Royal Society of Tasmania to a scholar of distinction in any field, in 2000. He has been a Fellow of the Australian Academy of Science since 1993.

Bill Budd wintered with ANARE at Wilkes in 1961 and at Mawson in 1964 and subsequently held positions with the Antarctic Division as Senior glaciologist and Head of the Glaciology Program. He has diverse research interests but in recent years has been involved particularly in the development and application of numerical models which incorporate the influences of the atmosphere, ice and ocean systems.



Professor Garth Paltridge
Photo courtesy of Antarctic CRC

IGLOO SATELLITE CABINS: THE NEXT 5 YEARS

2002 marks the twentieth year since the first fibreglass Igloo Satellite Cabin was designed and manufactured in Kettering, Tasmania, by Malcolm Wallhead. Although Malcolm died as a result of an accident in October 2000, Igloos continue to be manufactured according to his specifications and exported all over the world. Between 1987 and 1991, exported Igloos dominated sales. (Continued from Issue 18)

IGLOOS NO. 35 TO NO. 86, 1987-1991

The Japan Polar Research Association ordered the next Igloo, **035**, and this was sent to Japan in October 1987. Dr Tetsuya Torii, head of JPRA, also ordered a green Igloo (**036**) for the New Zealand Antarctic Division this year, which was sent to Christchurch, and another red Igloo (**039**) later in the year. A red Igloo (**037**) was then manufactured for display at the Queen Victoria Museum in Launceston, as part of an exhibition of Tasmanian inventors and innovators. The exhibition then moved to Hobart and the Igloo on show was eventually delivered to the Antarctic Division in 1988. Also during 1987, ITT Antarctic Services ordered extension panels for the Igloo they had previously purchased, and these were sent to NZ. The Igloos' modular form meant that additional panels and variations could be ordered at any time after the original purchase.

In August 1987, we received the first German order for an Igloo (**038**), from the Alfred Wegener Institute for Polar Research in Bremerhaven. This red Igloo was insulated with Klegecell, a pink foam sheet insulation which had to be heated to fit the compound curve of each Igloo panel. This type of insulation was trialed because of problems with the sprayfoamed insulation, which tended to peel off if poorly sprayed on, an event which happened too often in early Igloos when the operator had not established a method of spraying the foam evenly on to a curved surface.

The Australian Antarctic Division continued to order Igloos for new bases to be established on Australian Antarctic Territory, and eight Igloos made up Dovers Base in the Prince Charles Mountains. Prior to these, AAD ordered a 7 window Igloo (**040**) for Upper Atmosphere Physics, and an extended Igloo for use near Davis Base. While these were being prepared, an Igloo was sent to Papua New Guinea for an Austrade display. This was 'semi-tropical', with features such as an extended topknot, tinted windows and mosquito-proof air vents. This unit was acquired by the PNG Electricity Commission for line maintenance in the Highlands.

The first order from Greenpeace NZ was received at the end of 1987. The Igloo (**043**) was sent to NZ and later transported to Antarctica. The French Polar Institute also ordered an Igloo at this time, to accommodate workers at an airstrip under construction. Igloo **050** was the first Igloo with 4 sets of extension panels made, and along with a 7 window Igloo No **051**, completed the order by AAD for Dovers Base.

In April 1988, the National Safety Council of Australia (now disbanded) ordered an Igloo with anti-magnetic fittings to house a satellite microwave dish and phone link receiver for control in outback searches. All components fitted inside the Igloo, which meant it could be flown fully equipped to anywhere a search and rescue unit was set up. This Igloo was later purchased by the Victorian Alpine Resorts Commission.

Two Igloos for use in Antarctica were ordered by the Brazilian Naval Commission after this. It seems the New York shipping agent was unfamiliar with the location of Tasmania, because the Igloos were shipped to Rio de Janeiro via Singapore!

At the instigation of an agent in W.A., a white Igloo was made in April 1988 for shipment to the Pakistani Army, who was interested in using Igloos to accommodate troops ready to fight the Indian Army in the Himalayas. Although all arrangements were made to send the Igloo to Pakistan, the agent never received further details from the Army as to delivery of the Igloo, so this unit was later painted red to fulfill part of another AAD order.

Igloos **056** and **057** were ordered by the Institut für Vermessungskunde at Braunschweig, Germany, for use in Greenland. Both these Igloos were originally made for display at the Polar Technology Exposition in

Continued next page >



Above: Greenpeace's Igloo aboard *MV Gondwana* in Hobart



Above: ENEA's Igloo in fibreglass crate ready for loading aboard *Barken*.

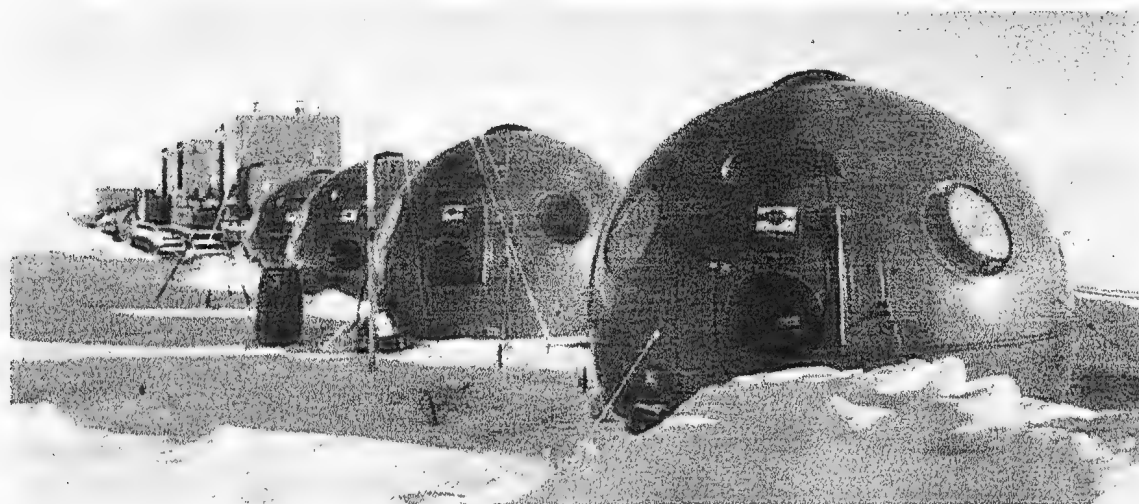
Right: Loading AAD's sealed Igloos on to truck.



Continued next page >

Hobart in September 1988. Hosted by the Tasmanian Development Authority and the AAD, suppliers from all over the world displayed their products with those of Tasmanian businesses. This Expo was one of the first to promote Hobart as Australia's Antarctic capital. Another German polar institute, the Federal Institute for Geosciences and Natural Resources, ordered the next Igloo (058), and Greenpeace ordered another at the end of 1988. This Igloo was assembled by Greenpeace members and crew on the helicopter deck of *MV Gondwana* in Hobart. The words 'World Park Antarctica - Greenpeace' were printed in large letters on both sides of the Igloo, which was shipped to Antarctica and set up where the French were making an airstrip, despite the close proximity of penguin rookeries. Apparently, a bulldozer rammed the Greenpeace Igloo to try and move it off the runway. This damaged several panels which were later replaced. The French Igloo already there blew away because the tie-down lines supplied were not used, and the airstrip was abandoned when part of a glacier collapsed over the runway.

An Italian polar institute, ENEA, was the next to buy Igloos, for a new base at Terra Nova Bay. Three Igloos were crated and delivered to the Hobart docks, where they were loaded aboard *Barken* for direct shipment to Antarctica. ENEA was the fourth group to use Hobart for collection of Igloos, after Australia, France and Greenpeace. Igloos 063-067 were all 3 or 4 panel extended Igloos for USA's ITT Antarctic Services. These were all crated individually and airfreighted to Christchurch NZ. Norway purchased the next 2 Igloos and in July 1987, Germany's Alfred Wegener Institute reordered, this time for 3 Igloos.



Igloos at
Dovers
Base, Ant-
arctica.

Photo courtesy
of Rod
Ledingham

An article in an airline magazine about Igloos attracted the attention of the operator of the Canberra Tradesman's Union Club, who purchased Igloo 074 to be on permanent display at the Downer Club. Complete with bunks, desks and interior fittings, this Igloo was the first to include an entrance tunnel. This was one of the Igloos mistakenly stockpiled in anticipation of further sales in 1989, none of which sold until later 1990. The Grollo Group of Melbourne also purchased one of these (076) for use on the Mt Buller skifields. Igloo 078 was another experimental greenhouse version manufactured for, but not by, MW&A. It was not as successful as hoped, due to poor laminating techniques and inappropriate resin.

A new USA export order for one Igloo was received from the University of Washington in Seattle at the end of December 1990, and another display Igloo was sent to the Westpac Museum in Sydney in June 1991. Four more Igloos had been purchased by AAD in 1990 and another 4 were ordered in 1991. These last were especially sealed units to waterproof them while on Heard Island. Transport to the Division required a crane to lift the Igloos on the 2 trucks. The panels of another Igloo, an extended, demountable one were packed inside the four sealed units.

The last Igloo for 1991 was for the Chilean Antarctic Institute, who ordered an extended Igloo (086), orange with a 30 cm dark green stripe around the sides. Applying the adhesive-backed, horizontal stripe to the curved wall surfaces took a whole day!

In all, 24 Igloos were manufactured for Australian purchasers, mostly for AAD, and most of the 28 exports were for use in Antarctica. *The next 5 years saw more sales of the tropicalised version of the Igloo, for use in National Parks in both Australian and New Zealand territories.*

FESTIVAL BRINGS THE ANTARCTIC TO HOBART

The midwinter solstice, which falls on June 21, is the shortest day of the year in the Southern Hemisphere. Australians living on scientific research stations at Casey, Mawson and Davis face bone-chilling cold, ferocious blizzards and almost total darkness at this time of the year. But the solstice marks a turning point, as the seasonal cycle promises the return of the light and the coming of the brief Antarctic summer.

It also marks, for the first time this year, the Antarctic Tasmania Midwinter Festival to be celebrated in Hobart. Festival Co-ordinator Paul Cullen says, 'We've had a staggering response from the whole Antarctic community. Government agencies, the University, private companies, individuals offering to help – its been an exciting race to get it all ready in time.'

'It's traditionally a time to celebrate in Antarctica,' says Cullen, who recently returned from twelve months as Station Leader at Casey, 'and Hobart is an Antarctic city, so it makes sense to get the wider community involved.' The nine-day Festival encompasses more than 80 separate events at 18 different locations, from June 15 - 23.

An ambitious schools program will put more than 1000 Tasmanian school children through Antarctic Discovery Days, where they will have a chance to learn at first hand about how Australians live, work and study in the harshest environment on earth. There are special exhibitions at the Tasmanian Museum & Art Gallery, the State Library, the Mercury Print Museum and Antarctic Adventure.

'It's not all museum displays by any means.' Cullen promises. 'There's a brilliant Film Festival put on by Screen Tasmania, live demonstrations of Antarctic rescue and diving operations, even a Huskies' Picnic for the children.' Social events include an Expeditioners' Reunion Barbecue and the curiously named Irish Antarctic Midwinter Hangi at Kettering. 'That will be a bit of fun on Midwinter Day - we've got ferries and coaches arranged to get people to Kettering, fireworks, entertainment and an authentic hangi dinner at the Oyster Cove Inn.'

Science plays a major role in Antarctica and it will be well represented during the Midwinter Festival. The Royal Society of Tasmania presents a series of lectures at the CSIRO Theatre, with some of Australia's top scientists talking on a variety of topics. The ABC's Robyn Williams will host 'Antarctica - Frequently Asked Questions' at the Federation Concert Hall and the 'Science in the Pub' team will be down to record a lively session at the Customs House Hotel on Sunday June 23.

The peak event is the Phillip Law Lecture, given by His Excellency Sir Guy Green, Governor of Tasmania at the Federation Concert Hall on Saturday June 23. Dr Law, who is 90 this year, will be coming over specially from Melbourne to attend this, and the Midwinter Dinner that follows at the Hotel Grand Chancellor, hosted by well-known Antarctic raconteur Tim Bowden.

'We've tried to include a wide range of events, so that every member of the community will find something to attend. It's about time that we celebrated Tasmania's connection with the Antarctic. This year, we'll be giving it a hell of a shake, but it's only the beginning of an Antarctic Midwinter Festival that will grow next year and the year after that.'

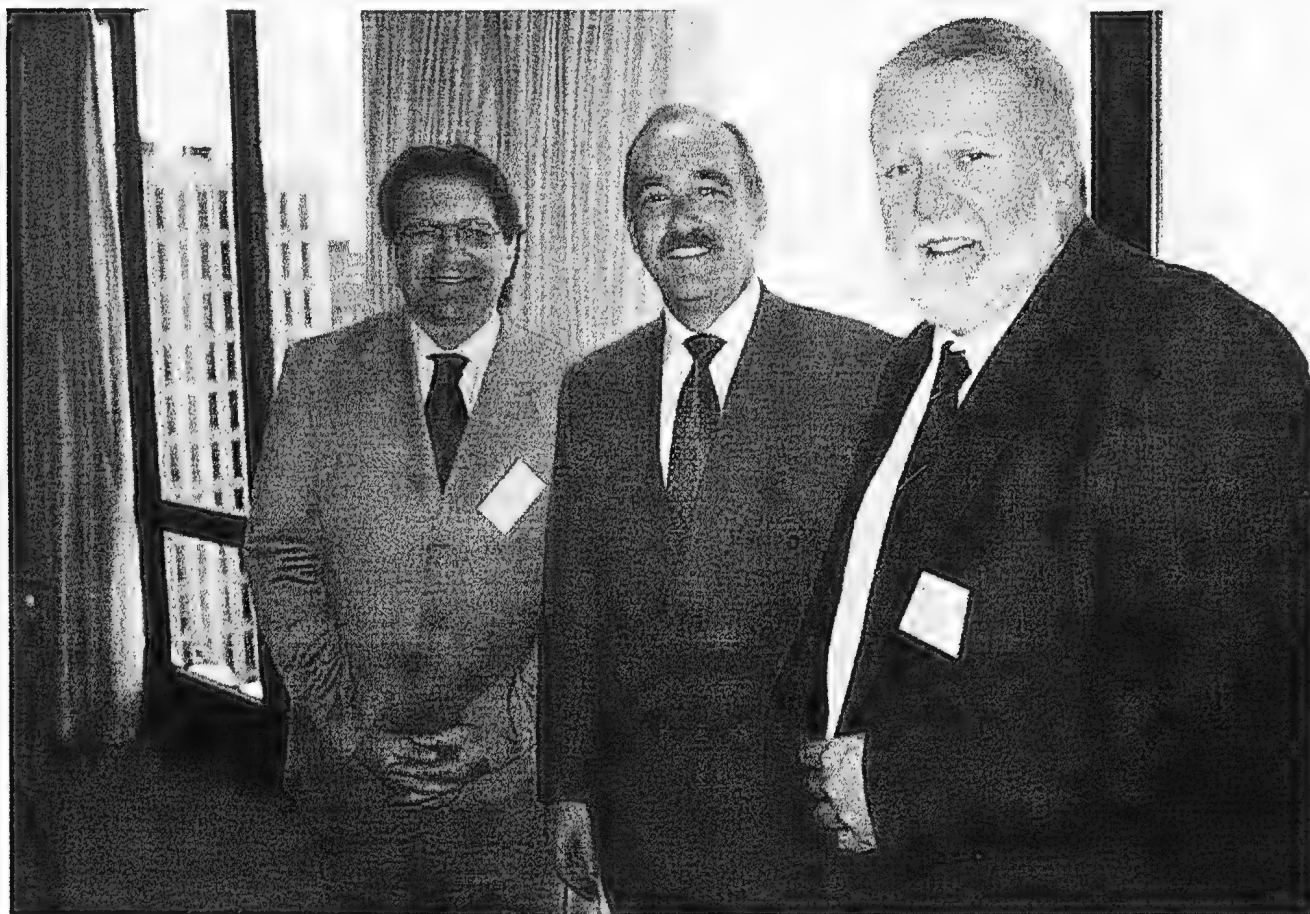
A full diary of Festival events can be found at the website:

www.antarctic-tasmania.info

NEW CCAMLR EXECUTIVE SECRETARY

In early February 2002, Dr Denzil Miller succeeded Mr Estaban de Salas to become the third Executive Secretary of the 23-nation Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Denzil has a PhD from the University of Cape Town and for the past 22 years was a Senior Specialist Scientist at the Division of Marine and Coastal Management of the South African Department of Environmental Affairs and Tourism, Cape Town. He has extensive experience in Antarctic marine science and in many aspects of marine fisheries policy, research and management. Denzil was the seventh recipient of the South African Antarctic Medal (1996) for his contribution to "Antarctic conservation and management". He has served as the Convenor of CCAMLR Working Group on Krill (1997-1994), as Chair of that organisation's Scientific Committee (1997-2000), and on a large number of national and international committees dealing with fisheries, environmental and Antarctic matters - including the scientific policy review panel for the Scientific Committee on Antarctic Research (SCAR). Having published over 60 peer-reviewed papers on Antarctic science, fisheries management, marine biology and marine policy, Denzil hopes to continue CCAMLR's vital work through a Secretariat committed to excellence in its day-to-day functions and service provision. He sees CCAMLR has an important organisation both internationally and in respect of its location in the Antarctic "gateway city" of Hobart.

PHOTO: Denzil Miller (Forefront) is welcomed to Tasmania by the Premier, Mr Jim Bacon, and by the Chair of CCAMLR, Dr Nicola Sasanelli.





SOCIAL ACTIVITIES

- The official launch of Antarctic Tasmania Midwinter Festival was held aboard the RSV Aurora Australis on 8 April, 2002. Premier Jim Bacon made the announcement to invited guests and the media on the helicopter deck of the ship.
- Later the same day, the Governor of Tasmania, Sir Guy Green, hosted a reception at government House for members and guests to celebrate CCAMLR's 20th Anniversary. The new Director of CCAMLR, Denzil Miller, presented the Governor with a plaque in acknowledgement of his support of the establishment of the Commission.
- Delegates attending the third international conference of Contaminants in Freezing Ground in April were given an Icebreaker Cocktail Party by members of the Tasmanian Polar Network at Antarctic Adventure. The Governor also hosted a reception for these delegates.
- A farewell function for the retirement of Professor Garth Paltridge, Director of the Antarctic CRC, was held at the University of Tasmania at the end of April. Professor Paltridge's replacement will be Professor Bill Budd, also of the Antarctic CRC.
- In May, a small reception was held by members of the Office of Antarctic Affairs and TPN to welcome the French ambassador, M. Pierre Viaux and acknowledge his ongoing support for the French Antarctic connection in Hobart.

TPN MEMBERS IN THE NEWS

- **Judy Hennessey**, owner of Aurora Designs and maker of unique Antarctic clothing, appeared in the Mercury in May, describing her latest request for skidoo gloves ordered by the University of Maine, USA.
- **Bill Bleathman**, Director of the Office of Antarctic Affairs, will change jobs this month and become the new Director of the Tasmanian Museum and Art Gallery.
- One of the businesses open to students on the Manufacturing Industry Open Day this year was **Moonraker Australia** at the Tasmania Technopark.

- University of Tasmania's Institute of Antarctic and Southern Ocean Studies was quoted as one of several examples of specialised research which earned the University 7th place in Australia's top ten research universities. The Antarctic CRC co-hosted a seminar as part of the Australian Innovation Festival in April this year.
- **Don and Margie McIntyre** hope to sell their Antarctic ship, *Sir Hubert Wilkins*, by June 14, but do not intend to cease Antarctic operations altogether.
- On April 13, **The Saturday Mercury** featured the TPN and quoted comments from several members.
- The Antarctic CRC's Antarctic Environmental Management Course due to be held in July has been cancelled due to insufficient enrolments.

POLAR BRIEFS

- Fifty prospective members of Greenpeace met in April in order to re-establish a Hobart chapter of the organisation. The local co-ordinator is Katie Stackhouse.
- Melting, bottling and exporting Antarctic ice was the topic for Mike Bingham's April 1 column in the Mercury this year. Unfortunately, this is no joke in Canadian waters!
- Sculptor Stephen Walker's 'Heading South' seals received a thorough cleaning last month to reduce the amount of excrement built up by visiting birds. The whole sculpture rests on rocks just outside Victoria Docks in Hobart, and an extra flat surface was made for the birds to rest on.
- Leonard Bickel, author of 'This Accursed Land' (Mawson's journey across Antarctica), died in NSW on February 16, 2002.
- 'Voyage of the Nautilus', the story of Sir Hubert Wilkins' submarine journey to the North Pole, was shown on ABCTV in May.
- A new University of the Arctic was opened last year. Based at Rovaniemi in Finnish Lapland, the university was established by 33 institutions from 8 circumpolar governments – USA, Canada, Denmark, Iceland, Finland, Norway, Russia and Sweden. For further details, see www.uarctic.org



OFFICE OF ANTARCTIC AFFAIRS

Antarctic Marketing Strategy

The Antarctic Marketing Strategy Background Information document has been finalised. The Antarctic Tourism Group is completing an implementation schedule as a result of the document. This implementation schedule outlines specific projects and actions flowing from the plan and will shortly be available on OAA's website.

The Proposed Antarctic Airlink

Skytraders Chief Executive, Mr Norman Mackay has held briefing sessions with both the Premier and the Governor on the Airlink project. The Division and Skytraders are progressing logistical issues and OAA have reaffirmed the local Antarctic community's co-operation and assistance. Skytraders have applied for interim membership of the Tasmanian Polar Network.

Tasmanian Polar Network

Contracts have been let for the development of a CD Rom and Display Banners for the TPN. TPN members Tweezy Multimedia and Belinda Pingala Walsh have been successful in gaining the contracts. Work continues on the translation of the TPN Website. Currently the Chinese, Japanese and Italian translations have been completed and CCAMLR are finalising the Russian, Spanish and French translations. It is proposed to "go live" with all translations at the same time.

Antarctic Cruising

OAA in co-operation with Tourism Tasmania are developing a portfolio of Tasmania's land-based tourist product for presentation to all Antarctic tourist companies. This information is being provided as a result of recent meetings with tourist operators. OAA is currently investigating the possibility of presenting this information to the upcoming International Association of Antarctic Tourism Operators AGM.

Mid Winter Event

The Mid Winter Event is almost upon us. The office continues to work closely with the organising committee to maximise its positive impact on the community. Special thanks go to Paul Cullen, Event Co-ordinator for his professional and tireless efforts in managing what has now developed into a major Tasmanian festival.

Message from Ben Galbraith

Whilst Bill Bleathman has only been involved in Antarctic Affairs over an 18-month period, he has in this short time made a significant and lasting contribution to the area. His future involvement will be greatly missed, however I'm sure that we join in wishing him every success in his future directions with the Museum.

The Tasmanian Polar Network will farewell Bill Bleathman at an informal function following the TPN meeting on June 7, 2002.

POLAR NEWS



MORE ANTARCTIC STAMPS

Australia Post is issuing new Australian Antarctic Research stamps on July 2, 2002. Each of the four bases, Davis, Casey, Mawson and Macquarie Island, are highlighted, with a foreground image and station buildings in the background. Also included on each stamp is a globe, which indicates the position of the station in Antarctica.

BEAR TRACKS

Two female polar bears have been fitted with transmitters so that their positions can be tracked on a website set up by the Norwegian Polar Institute and World Wildlife Fund. Scientists and conservationists are concerned that climate changes are causing the ice to melt earlier in the year, thus shortening the bears' hunting season. Less time to feed on seals from ice packs leads to a lower body weight than is required for sufficient lactation and therefore a greater mortality rate among cubs.

The other danger facing polar bears is toxic chemicals like PCBs accumulated in the Arctic waters. High PCB levels build up in the bears' layers of fat. This disrupts their hormone systems as well as causing sex changes and greater susceptibility to disease.

CLIMATE FUNDING VITAL

The World Climate Research Program held its 23rd meeting in Hobart in March. Hosted by CSIRO and Antarctic CRC, scientists from Africa, Canada, China, Germany, India, Japan, Russia, UK and USA focussed on predicting climate patterns and examining issues relevant to climate variability, such as global ocean observations and the influence of the Southern Ocean on world climates. Australia's role in climate predictions is currently at risk due to diminishing funding, despite continuing proof of the accuracy of these predictions.

ICE CHALLENGER EXPEDITION

Using an experimental all-terrain vehicle called Snowbird 6, 2 Englishmen recently claimed to be the first to drive across Bering Strait from Alaska to Siberia. Russia refused entry to Siberia but the men were able to drive on ice as far as the International Dateline. Snowbird 6, which took 5

years to design, is a tracked vehicle with manoeuvrable, large cylindrical screw devices on either side. It can float on water or through crushed ice and climb on to icebergs.

NEW ANTARCTIC YACHT RACE

Plans for a biennial Antarctic Cup yacht race have been announced by the Royal Perth Yacht Club. Starting and finishing in Fremantle, WA, the first race will be held in December 2004. Entrants are required to pay \$8.7 million, \$6 million of which pays for the construction of the specified boat. Each team entering must represent a nation and only sailors from that nation can crew the boat, which must be a 25m yacht designed by WA naval architect Ron Holland. The maximum number of yachts is 15 and they will sail south to the Southern Ocean and then east past Cape Leeuwin, Cape Horn and the Cape of Good Hope. If the race goes ahead, it will be the richest in the world, with prizes totalling \$12 million. For further details, see www.antarcticacup.com

NORTH POLE SUCCESS

John Muir and Eric Phillips, Australian explorers who completed their historic, unassisted trek to the North Pole on May 1, traversed 950 kms over 58 days. The pair set out from Cape Arktichevski in Siberia on March 4 and despite losing contact with their support team for 8 days when their tracking beacon stopped working, managed to ski and kayak their way to the Pole without additional assistance. They returned from the Pole by air. Information about their trek is available at www.icetrek.com

METEOR FINDER

On a recent mission in Antarctica, a robot searching for meteors correctly identified 5 rocks out of 7 it found. The sensors on Nomad, the robot created at Carnegie Mellon University in Pittsburgh USA, were even able to find a very rare meteorite which was not expected to be spotted.

EXTRA FISHERIES SUPPORT

Austral Fisheries will support the Australian Government's bid to list the Patagonian Toothfish on the Convention on International Trade in Endangered Species.

ASTROLABE BOOKSELLERS



Fine, Old & Rare Books

Specialising in Tasmaniana
& Antarctica

First floor, 81 Salamanca Place, Hobart
Phone /Fax: (03) 6223 8644
e-mail: books@astrolabebooks.com.au
www.astrolabebooks.com.au



HELICOPTER RESOURCES PTY LTD

With over twenty years of Antarctic experience Helicopter Resources has forged an enviable record in the service and support of Antarctic operations.

Helicopter Resources is committed to safety reliability and customer satisfaction.

Helicopter Resources are experts in the field of Antarctic helicopter support.

Phone: 03 6248 5130
Fax : 03 6248 5342
e-mail: helioreshobart@southcom.com.au
Post : PO box 321 Rosny Tasmania 7018

PURDON & FEATHERSTONE

Hobart waterfront contractors and ship chandlers for approx 150 years

Purdon & Featherstone is a privately owned Tasmanian company providing wholesale and provisioning services in the state of Tasmania from their headquarters based in Hobart. Internationally respected for their reliability and service in the supply of food, machinery, parts, fuel and other supplies to shipping vessels. Continually trading for almost 150 years we are one of the oldest trading companies in Tasmania.

Purdon & Featherstone are the contract food suppliers to the Australian Armed forces and have recently renewed their long-standing supply agreement.

For many years Purdon & Featherstone have supplied all ships stores to the visiting Japanese Tuna fleet in association with their Tasmanian agents.

We are also the sole supplier of all food and beverage supplies to the Australian Antarctic Bases and Macquarie Island.

Incat Tasmania, builders of world class speed catamarans, are long-standing clients with provisions for all delivery and charter vessels supplied by Purdon & Featherstone.

General shipping suppliers to a variety of visiting and local merchant vessels.

PRODUCT SUPPLIES:

Ship stores, food, bonded goods, deck, engine, medical, cabin etc.

PORT SERVICES:

Launch hire, bonded storage, general storage facilities. Interpreter services to overseas shipping.

QUALITY CERTIFICATION:

Aust. Quarantine Service accredited storage and packing facility; Aust. Armed Forces accredited supplier and distributor.



**PURDON &
FEATHERSTONE**

EST. 1840
Wholesale & Shipping Supplies for over 160 years

Phone 03 62242810
Fax 03 62245900
Email pandf@fader.com.au

Warehouse 4a Macquarie Wharf
Hobart Tasmania 7000



ANTARCTIC ADVENTURE

Antarctic Adventure and Tweezy team up to develop a “cool” Tasmanian product

We already knew Antarctic Adventure was “cool” — but after teaming up with innovative Tasmanian Internet, multimedia and software company, Tweezy, the Salamanca Square Centre has become even “cooler”.

Working closely with general manager Rodney Cameron-Tucker and the rest of the team at Antarctic Adventure, Tweezy has created a unique electronic content delivery system, together with a series of entertaining and educational 3-D games. Called the “IceBox”, the application allows Antarctic Adventure staff to quickly allocate content to all or selected “kiosk” computers (those used by visitors) throughout the Centre. For example, this means that a number of computers can be selected to display a series of comprehensive Antarctic-related websites, while the remaining computers provide visitors with games or other fun and informative material.

“Another benefit of the IceBox is that our staff members can easily plan the kiosks layout throughout the Centre, change themes and content and schedule kiosks to shutdown at a particular time,” Rodney said. “The IceBox also provides them with up-to-date information on kiosk operations, as well as identifying themes and games most popular with patrons. This is a perfect example of how Tasmanian businesses can work together to develop innovative solutions, and further highlights Tasmania’s position as an “Intelligent Island” with businesses can solve problems locally and export the solutions globally.

Rodney said Phil Wood of Tweezy had many years of experience with the Australian Antarctic Division at Kingston, and this had ensured that he and his team had an excellent understanding of Antarctic issues and the Centre’s needs.

“However, another of the factors that makes his work stand out is the fact that while IceBox has been specifically designed to meet Antarctic Adventure’s needs, the application has the potential to provide online information for other exhibition spaces, including museums and interpretative centres, and it could also be adapted to support a series of information kiosks throughout department stores and supermarkets,” Rodney said. “The possibilities are infinite — it just goes to show what can happen when you bring together imagination, skill, talent and the will to make something happen.”

But IceBox is not the only exciting and innovative solution Tweezy has developed for Antarctic Adventure, which is quickly fulfilling its goal of becoming one of Tasmania’s most visited tourist attractions.

The Kingston-based company has also developed an exciting 3D game — the first in a series to be created for the Centre — that allows the users to experience the thrill of driving an Antarctic icebreaker.

“Users are faced with the challenge of safely navigating their way to an Antarctic station by choosing the best course, navigating around icebergs and sea-ice, while at the same time receiving weather and ice condition reports that assist in the decision-making process,” Phil said.

“It’s a game designed to provide “kids” of all ages with a fantastic adrenalin rush, as they need to remain alert and take into consideration all the information and situations that are thrown at them. “It’s a game that fulfils Antarctic Adventure’s goals of simultaneously entertaining and educating.”

These joint Antarctic Adventure/Tweezy projects herald the start of further exciting experiences at the Centre. Rodney said Antarctic Adventure looked forward to boosting its profile both in Tasmania, and particularly interstate. “We already offer something quite unique in Australia and we are working on making the centre even more interesting and fun and spreading the message that we’re here,” he said.

“Working with people like Phil and businesses like Tweezy can only further enhance our reputation.”

[See advertisement next page]

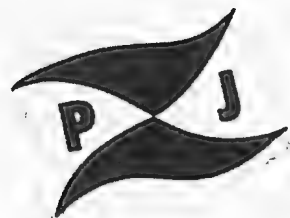


ICEBREAKER *the game*

Take the challenge!



2 SALAMANCA SQUARE
Salamanca Place
HOBART TAS 7000
PH. 62 208220

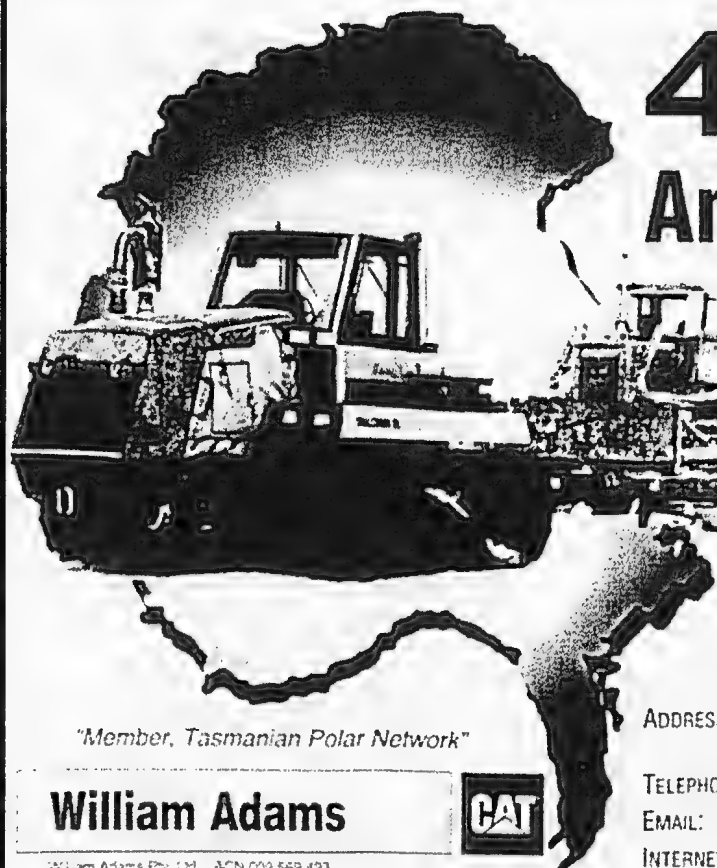


Peter Johnston Pty Ltd.
Ship Chandlers and Sail Makers

A.C.N. 009 486 033

**Suppliers of Marine
Equipment to
ANTARCTIC EXPEDITIONS
SINCE 1964**

Phone (03) 6234 5422



46 years Antarctic service.

William Adams and Caterpillar are the specialist suppliers of purpose built, Australian developed, traverse systems, materials handling equipment and power generation packages.

With 46 years of Antarctic experience our Polar Services Group can supply a full range of logistical and support services.

"Member, Tasmanian Polar Network"

William Adams



William Adams Pty Ltd A/CN 009 569 493

ADDRESS: 2 Chardonnay Drive, Berriedale, Tasmania, Australia.
P.O. Box 124, Glenorchy, Tasmania 7010.

TELEPHONE: +61 3 6249 0566 FACSIMILE: +61 3 6249 5574

EMAIL: wadams@wadams.com.au

INTERNET: <http://www.wadams.com.au>

POLAR PUBLICATIONS



BOOKS:

'THE VOICE OF THE NATIVES: THE CANADIAN NORTH AND ALASKA' by Hans Ludwig Blohm. Published by Penumbra Press. Price: unknown

Contains recent Inuit stories and the author's photos of northern polar areas.

'SACRED HUNT' by David Pelly. Contact 'Above & Beyond' magazine, info @ above-n-beyond.com

A collection of interesting Inuit stories and knowledge.

'THIS COULD BE HEAVEN: SEVEN SEASONS IN GREENLAND' by Gretel Erlich. Published by 4th Estate/Harper Collins. Price: \$51.95

Describes lifestyles and seasonal changes in Greenland.

'MOUNTAINS OF MADNESS: A JOURNEY THROUGH ANTARCTICA' by John Long. Published by Allen & Unwin. Price: \$24.95.

Describes the author's Antarctic expedition searching for Devonian fish fossils in the Transantarctic Mountains, over 200 kms inland from the Ross Sea base. The book also includes descriptions of other areas, as well as anecdotes of Antarctic life and details of expedition planning.

'ANTARCTICA' by Rosemary and Pat Keough. Publisher unknown. Price: \$3,773.73.

This 14 kg book by two Canadian photographers has 300 photographs of Antarctica. Only 950 copies have been printed and Fullers Bookshop in Hobart has the only copy available in Australia.

'THE HISTORY OF THE ANARE CLUB 1951-2001'. Compiled, written and published by members of the ANARE Club Incorporated. Available to ANARE Club members and subscribers of AURORA magazine.

A very interesting book covering the range of activities undertaken by members of the ANARE Club over the past 50 years, as well as the history of AURORA magazine. Personal letters and recollections; photos of members; drawings by Fred Elliott; Club projects and early AURORA covers are interspersed with ANARE Club records, logos and lists of members.

PRINTS ON VIEW

SEA CREATURES, LIFE BELOW THE SURFACE – An exhibition of 35 lithographs from drawings by naturalists on explorer Dumont D'Urville's voyages between 1827 and 1840. Display also includes William Buelow Gould's sketchbooks of fishes which inspired Richard Flanagan's 'Gould's Book of Fish.' Open Monday to Friday, 9.30am to 5pm at the Allport Library and Museum of Fine Arts in the State Library of Tasmania, Murray Street, Hobart.

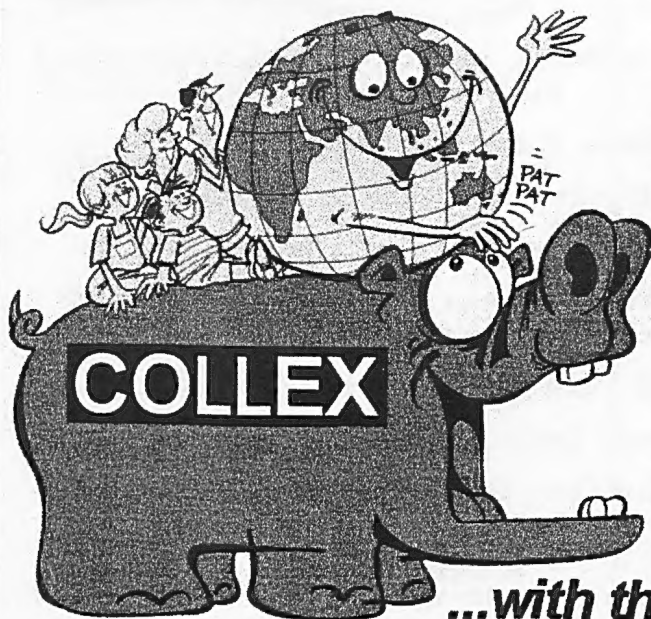
COOL FILMS IN HOBART IN JUNE

'SHACKLETON' - A two part production on ABC TV, Sundays 16 and 23 June.

'SNOW DOGS' - Screening at Village Cinemas.

PLUS - THE ANTARCTICA TASMANIA MIDWINTER FESTIVAL FILMS AS LISTED IN THE ENCLOSED BROCHURE - English, French and Australian stories and documentaries.

Sustainability for our future



- Industrial, Commercial and Domestic Waste Disposal
- Septic Tanks - grease traps
- Liquid waste collection
- Lagoon de-sludging
- Waste oil - collection
- Drain Cleaning
- Sanitary
- Hospital/Medical Waste Bins
- Environmental Audits
- Paper and Cardboard collection

...with the planet in mind!

Hobart Head Office
75 Mornington Road
Mornington 7018
Ph.6244 7171

ATTENTION: **ADVERTISERS** **IN** **ICE BREAKER**

PLEASE SUPPLY
ADVERTISEMENTS IN ONE OF
THE FOLLOWING FORMATS:

.jpg or .bmp
.pdf
.doc with embedded images
in .jpg or .bmp
or
.photoshop.psd

Send to:
wallhead@netspace.net.au
-only \$27.50 per quarter page-

IRIDIUM is BACK

And works in Antarctica !



Phone us now for all your
Communications needs

Free call 1800 630 611
e-mail sales@marcomwatson.com.au

MW **Marcom-Watson Group**

POLAR CALENDAR



7	June	2002	Tasmanian Polar Network Meeting. 11.00am. CCAMLR Headquarters, Hobart, Tasmania.
8-9	June	2002	Heard Island Working Group. Hobart, Tas. Contact AAD.
10-15	June	2002	Regional Sensitivity to Climate Change Workshop, Hobart, Tas.
14	June	2002	Opening night for Midwinter Festival. Salamanca Square, Hobart, Tas.
15-23	June	2002	Antarctica Tasmania Midwinter Festival events. Contact: cruckstuhl@oaa.tas.gov.au and check www.antarctic-tasmania.info
1-5	July	2002	IAATO Annual Meeting. Cambridge, UK. Contact: iaato@iaato.org
7-12	July	2002	ILCR (LIDAR Conference). Quebec, Canada.
15-19	July	2002	COMNAP XIV. Shanghai, China. Contact: jsayers@comnap.aq
15-26	July	2002	SCAR XXVII. Shanghai, China.
5-16	August	2002	Working Group on Ecosystem Monitoring and Management. Montana, USA
17-25	August	2002	National Science Week. Australian Science Festival, Canberra, ACT., Great Australian Science Show, Melbourne Museum, Victoria.
3-7	September	2002	Committee for Environmental Protection meeting.
3-14	September	2002	XXV Antarctic Treaty Consultative Meeting. Warsaw, Poland.
7-16	October	2002	Working Group on Fish Stock Assessment. Hobart, Tasmania.
21-25	October	2002	Scientific Committee annual meeting. Hobart Tasmania
21	October	2002	
1	November	2002	CCAMLR annual meetings. Hobart, Tasmania.

ICE WORDS

WATER SKY – A dark reflection on the sky, cast up from open water at some distance from the Observer, and significant when navigating through pack ice.

WILLYWAW – A sudden violent squall, also known as a **woolly**.

WYSSA – A telex message sent or received in the Antarctic or Sub-Antarctic. The five-letter Australian Antarctic Division telex code stands for "All my (our) love darling."

YIKLA – An expression from the ANARE Code, meaning "this is the life."

Words courtesy of Bernadette Hince's 'The Antarctic Dictionary.'

tweezy

Internet • Multimedia • Software

innovative digital solutions

web site development
multimedia products
software applications
graphic design

***Proud to be supporting
the Tasmanian Antarctic community***

70a Browns Rd
Kingston Tasmania 7050
Phone: 6229 3090

Email: info@tweezy.com Web: www.tweezy.com



Hobart International Airport Pty Ltd
congratulates the City of Hobart
on being selected as the preferred city of
departure for the Antarctic air link.

The company is proud to be part of
this important and exciting development
in the operations of the
Australian Antarctic programme.

www.hobartairpt.com.au

 **BOC SAFETY**
FULL SERVICE. FULL SUPPORT.

WORKWEAR FOR THE COLD

Protect yourself and your
people from the cold
by purchasing a full range
of specifically designed
workwear from BOC.

Call us locally on

03 6272 6844



ANTARCTIC AND SOUTHERN OCEAN SHIPPING CALENDAR

2	June	2002	AURORA AUSTRALIS	Departs Hobart, research.
29	September	2002	KAP. KHLEBNIKOV V1.1	Departs Cape Town, South Africa.
1	October	2002	L'ASTROLABE	Departs Hobart for Antarctica.
6	October	2002	KAP. KHLEBNIKOV V1.1	Mawson Base.
13-16	October	2002	KAP. KHLEBNIKOV V1.1	Davis Base.
13-22	October	2002	AURORA AUSTRALIS V1	Departs Hobart, trials & marine science.
22-25	October	2002	KAP. KHLEBNIKOV V1.1	Casey Base.
25-26	October	2002	AURORA AUSTRALIS V1	Macquarie Island.
30 19	October November	2002-	AURORA AUSTRALIS V1	Marine Science.
2	November	2002	KAP. KHLEBNIKOV V1.1	Arrives Hobart.
19	November	2002	AURORA AUSTRALIS V1	Arrives Hobart.
22	November	2002	AURORA AUSTRALIS V2	Departs Hobart.
27	November	2002	KAP. KHLEBNIKOV V2.1	Departs Lyttleton, NZ.
4-9	December	2002	AURORA AUSTRALIS V2	Davis Base.
9	December	2002	KAP. KHLEBNIKOV V2.1	Casey Base.
10-12	December	2002	AURORA AUSTRALIS V2	Sansom Island.
15	December	2002	KAP. KHLEBNIKOV V2.1	Davis Base.
15-19	December	2002	AURORA AUSTRALIS V2	Mawson Base.
17	December	2002	POLAR BIRD V3	Departs Hobart.
20	December	2002	KAP. KHLEBNIKOV V2.1	Mawson Base.
26 1	December January	2002-	POLAR BIRD V3	Casey Base.
31	December	2002	AURORA AUSTRALIS V2	Arrive Hobart.
10	January	2003	POLAR BIRD V3	Arrive Hobart.